EPA's Greenhouse Gas Reporting Program: Building the Foundation for Informed Policy

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Presentation Outline



- Overview of the GHG Reporting Program
- Electronic Data Collection and Verification
- Snapshot of Reported Data
- Demonstration of the GHG Publication Tool
- Q&A

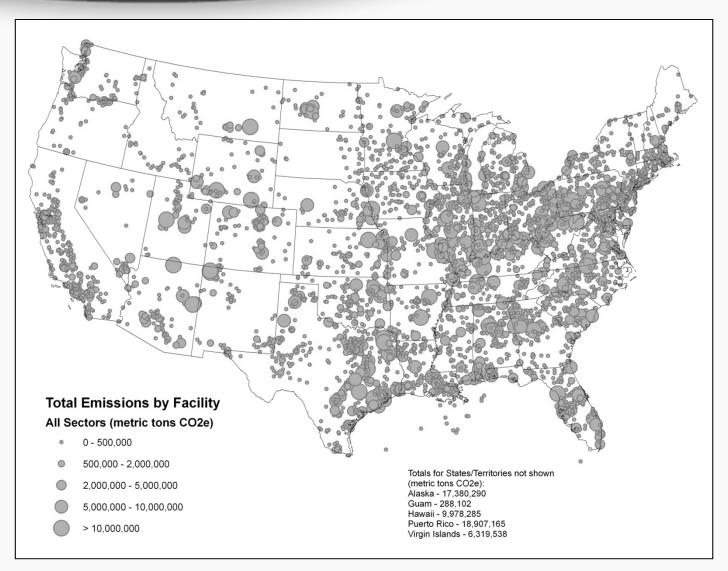
What Is EPA's Greenhouse Gas Reporting Program?



- First-of-its-kind GHG reporting from upstream and downstream sources across the U.S. economy
- Provides foundation for making informed policy, business, and regulatory decisions
- Mandatory under Clean Air Act (legally required and enforceable)
- Fully integrated electronic reporting and verification
- Transparency all non confidential data is made available to the public
- Innovative tools for analysis and geographic visualization

Greenhouse Gas Reporting Program Reporters - 2010





How Does the Reporting Program Relate to the U.S. Inventory?



- Inventory of GHG Emissions and Sinks annual report submitted to UNFCCC
 - Top Down approach: aggregated national data by sectors
 - Limited geographic distribution
 - Estimates based on data from variety of sources
 - Sectors defined by UNFCCC
 - Covers 100% of US GHG emissions and sinks
- Greenhouse Gas Reporting Program
 - Bottom Up approach: facility-level data above threshold
 - Geographic data collected
 - Calculated emissions from different group of industry sectors
 - Additional data collected on facilities
 - Covered 80% of US GHG emissions in Reporting Year 2010



Key Elements of Greenhouse Gas Reporting Program



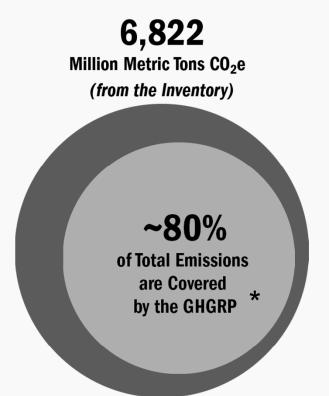
- Annual reporting of GHGs by 41 source categories:
 - 33 types of direct emitters
 - 6 types of suppliers of fuel and industrial GHG
 - Facilities that inject CO₂ underground for geologic sequestration, enhanced oil recovery, or any other purpose
- 25,000 metric ton CO2e reporting threshold for most sources
- Direct reporting to EPA electronically
- EPA verification of emissions data





GHG Emissions Coverage: 2010





^{*}GHGRP data does not include emissions from agricultural and land use changes and sources less than 25,000 mtCO₂e.

^{•12} source categories required to submit annual data to GHGRP starting with reporting year 2011. These additions will bring emissions coverage to ~85-90%.

Estimated Coverage

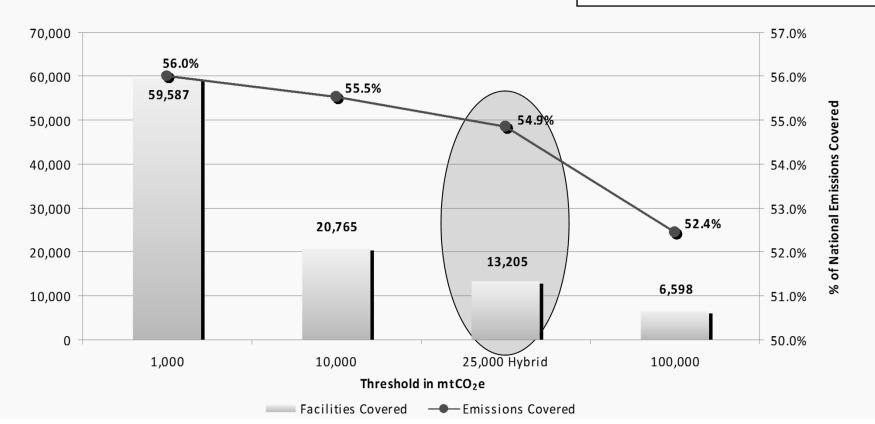
Facilities Covered



Downstream Facility and Emissions Coverage

- Emissions coverage is for downstream sources only. Including upstream sources increases emissions coverage by 30-35%
- Facility coverage represents both upstream and downstream sources

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Source Categories Covered by the GHG Reporting Program



Power	Refining & Petrochem.	Other Chemicals	Combustion	Waste	Metals	Minerals	Pulp & Paper	High GWP Gases
-Electricity Generation - Electrical Equipment Mfg Use of Electrical Equip.	- Petroleum Refineries - Petrochem. Production	- Adipic Acid -Ammonia -Hydrogen Production - Nitric Acid - Titanium Dioxide - Phosphoric Acid	- Stationary Combustion	- Municipal Landfills - Industrial Waste Landfills - Waste Water Treatment	AluminumFerroalloyIron & SteelLeadZincMagnesiumSiliconCarbide	- Cement - Glass - Lime - Misc. Carbonate Use - Soda Ash Production	- Pulp & Paper	- Fluorinated GHG Prod. - HCFC-22 Prod./HFC-23 Destruction - Electronics Mfg. - Pre-Charged Equip. Imp./Exp. - Suppliers of Industrial Gases
Petroleum & Natural Gas Systems – Direct Emissions		Fuel Suppliers			Carbon Cap &Sequestrat		Mining	
 Onshore Production Offshore Production Natural Gas Processing Natural Gas Transmission/Compression Natural Gas Distribution 			 Coal based Liquid Suppliers Petroleum Product Suppliers Natural Gas Distribution Companies Natural Gas Liquids Suppliers 			- Suppliers of - Injection of - Geologic Sequestration	CO2	- Underground Coal Mines
- Liquefied Nat	Natural Gas Sto ural Gas Storage ural Gas Import/l)						Direct Emitters Suppliers CO2 Injection

Stakeholder Outreach and Identifying Covered Reporters



- Existing data bases (e.g., Department of Commerce, Department of Energy, voluntary programs- Climate Leaders)
- Trade Associations
- Commercial data bases (e.g., Dun and Bradstreet)



Electronic Data Collection and Verification



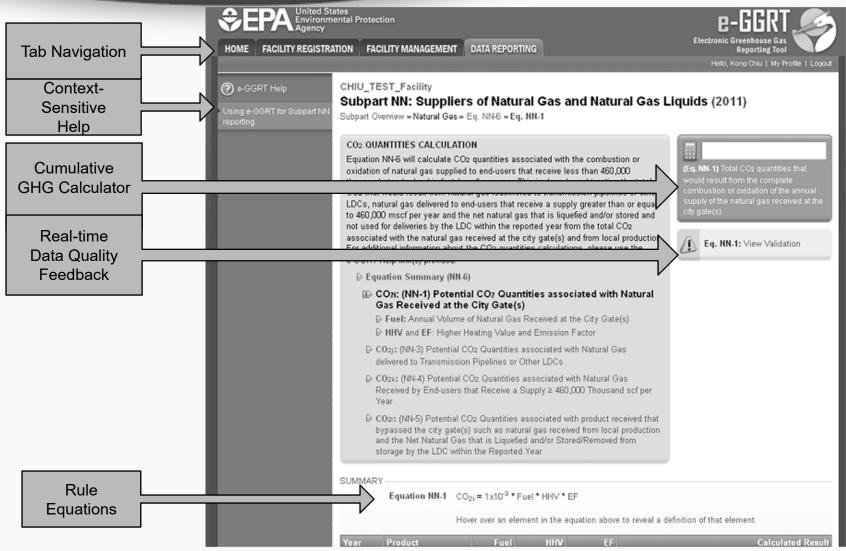
Electronic GHG Reporting Tool



- EPA's electronic Greenhouse Gas Reporting Tool (e-GGRT)
- Web-based application for facilities/suppliers to report directly to EPA
- Secure data submission for registered reporters only
- Also includes option for direct data upload via XML
- Annual reports are electronically submitted

Electronic GHG Reporting Tool





High Quality Data Begins with High Quality Submissions



- Comprehensive GHG Reporting Program Help Site
- Context-Sensitive Help within e-GGRT
- Staffed Help Desk
 - Received over 3,000 help desk
 requests during Reporting Year 2010 Season
- Training Webinars
 - Rule overviews, e-GGRT overviews, registration, testing and subpart webinars
- Stakeholder Testing of e-GGRT



Data Verification



- Electronic Verification
 - Pre-submittal checks in e-GGRT for reporters
 - EPA verification after submission using statistical checks
- EPA follow-up with reporters on potentially substantive errors
 - Secure communications via e-GGRT and phone follow-up
- · Resubmissions by reporters, as needed
- EPA has the authority to conduct field audits



Data Publication

ghgdata

Data Publication Overview



- http://ghgdata.epa.gov/ghgp/main.do
- 2010 data published in January 2012

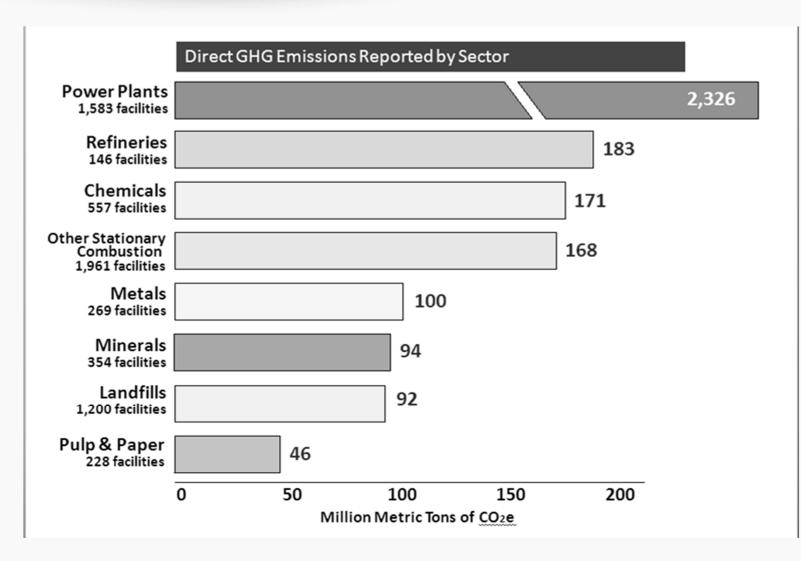
 Data publication website allows stakeholders and the public to access the key data elements quickly and easily and to sort data by location,

sector, and by gas



Emissions by Sector- 2010





Looking to the Future



Sharing information, building partnerships, and creating opportunities

Developing and implementing GHG Reporting Program

- Collecting accurate GHG data and improving data quality
- Publishing GHG data

Using the GHG data

- Identifying sources of GHG emissions
- Helping businesses track emissions and find cost-saving efficiencies
- Providing information to the finance and investment communities

Informing program development

 Facilitating activities and programs at the Federal, State, and local levels

For More Information



GHG Reporting Program: www.epa.gov/ghgreporting

GHG Data Publication: ghgdata.epa.gov

Questions: GHGReporting@epa.gov

Live Demonstration of GHG Data Publication Tool



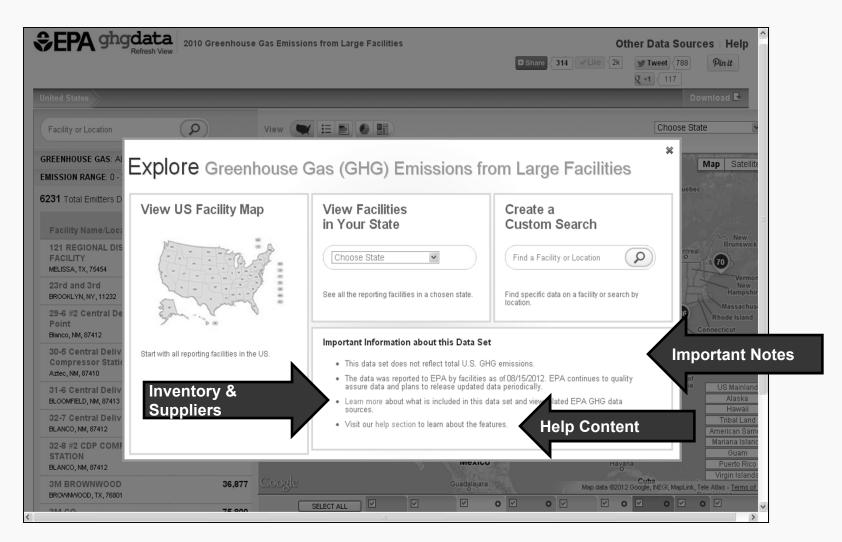
http://ghgdata.epa.gov



Backup Slides in Lieu of Live Demonstration

Introductory Page





US GHG Inventory & Supplier Data



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EPA GHG Emissions Data Sets

U.S. Greenhouse Gas Inventory

Go to U.S. GHG Inventory

track trends in total

EPA develops the national q national GHG emissions and re als. The Inventory presents national estimates of GHG emissions starting in 1990 and for each subsequent year and is submitted to the United Nations in accordance with the Framework Convention on Climate Change. EXIT Disclaimer The Inventory is a comprehensive, sectoral level accounting of all human-related sources of greenhouse gas emissions in the United States. The emissions presented in the U.S. greenhouse gas inventory are generally based on national-level statistics.

Greenhouse Gas Emissions from Large Facilities

Return to Direct Emitter Data



Through EPA's Greenhouse Gas Reporting Program, facilities that emit 25,000 metric tons or more per year of GHGs are required to annually report their GHG emissions to EPA. The facilities are known as direct emitters. The data reported by direct emitters provides a "bottom-up" accounting of the major sources of GHG emissions associated with stationary fuel combustion and industrial processes. Well over half of total U.S. greenhouse gas emissions are accounted for in this facility level data set, including nearly complete coverage of major emitting sectors such as power plants and refineries.

» View GHGRP data for direct emitters.

Greenhouse Gas Emissions Associated with Products Supplied



Under EPA's Greenhouse Gas Reporting Program, suppliers of ce fluorinated gases are required to report the GHG quantities that we release, combustion, or oxidation of the products they supply to the economy. These fuels and industrial gases are not emitted from the supplier facility but instead distributed throughout the country and used. The majority of direct GHG emissions associated with the transportation, residential and commercial sectors are accounted for by these suppliers.

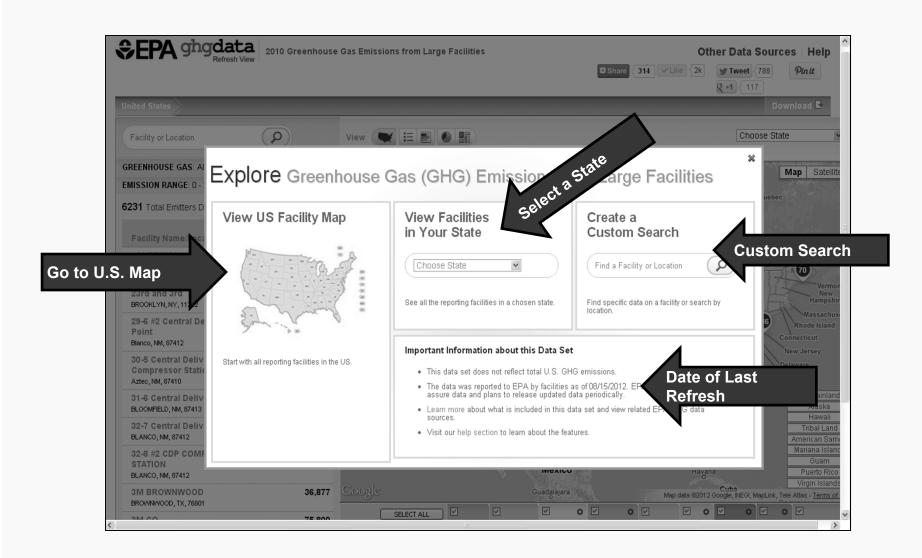
» View GHGRP data for suppliers.

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View Supplier Data

Introductory Page





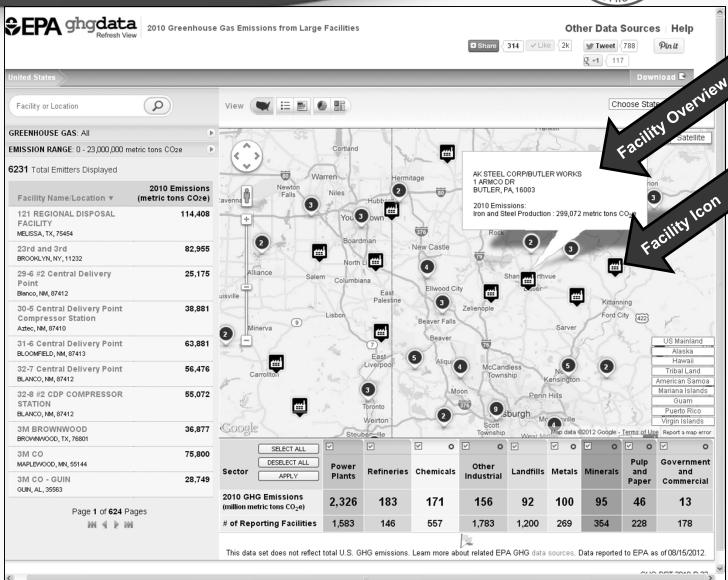
User Interface View





Isolate Individual Facilities



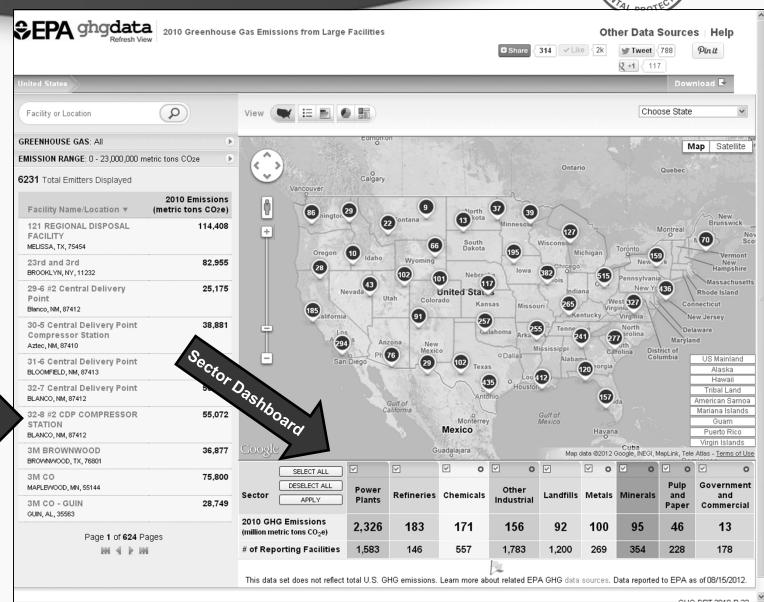


User Interface View

List of

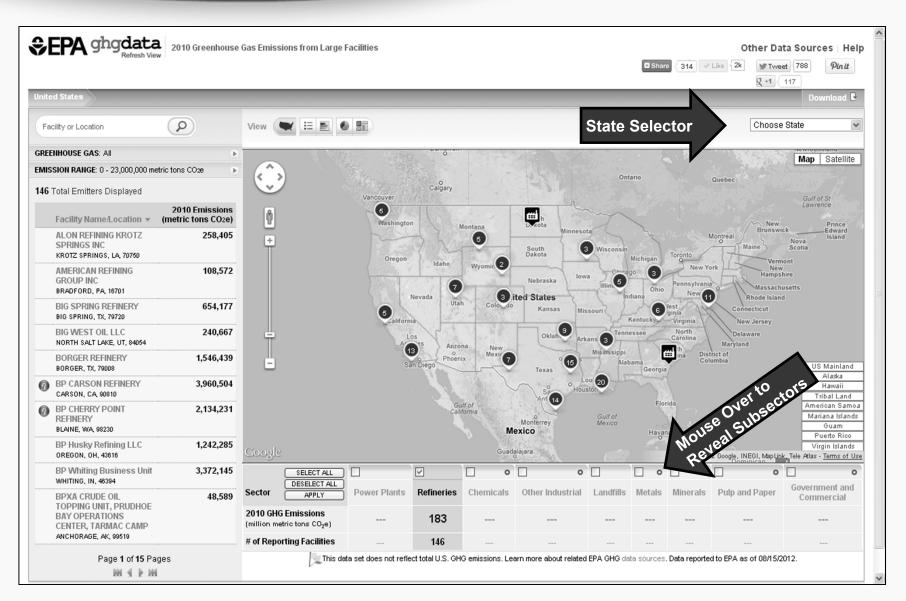
Emitters





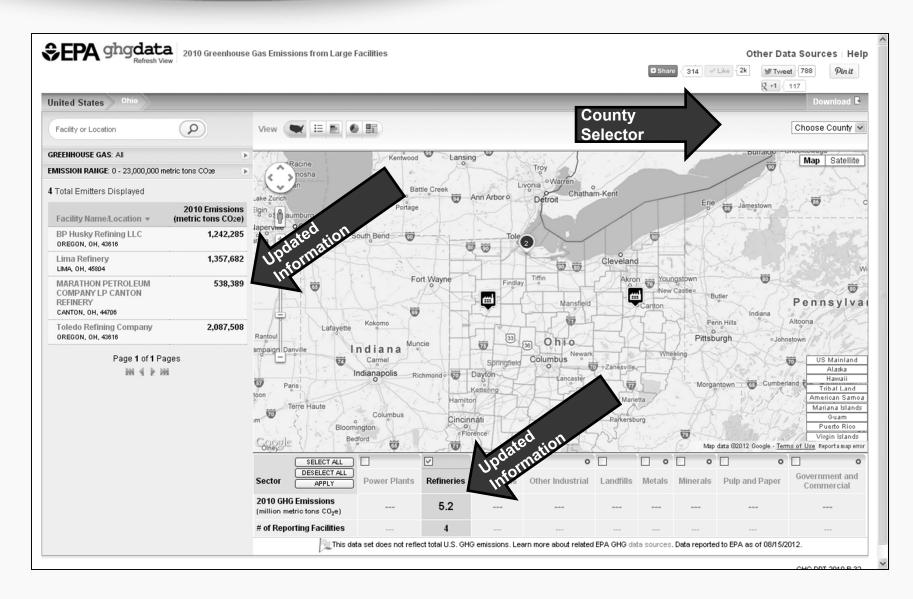
All U.S. Refineries





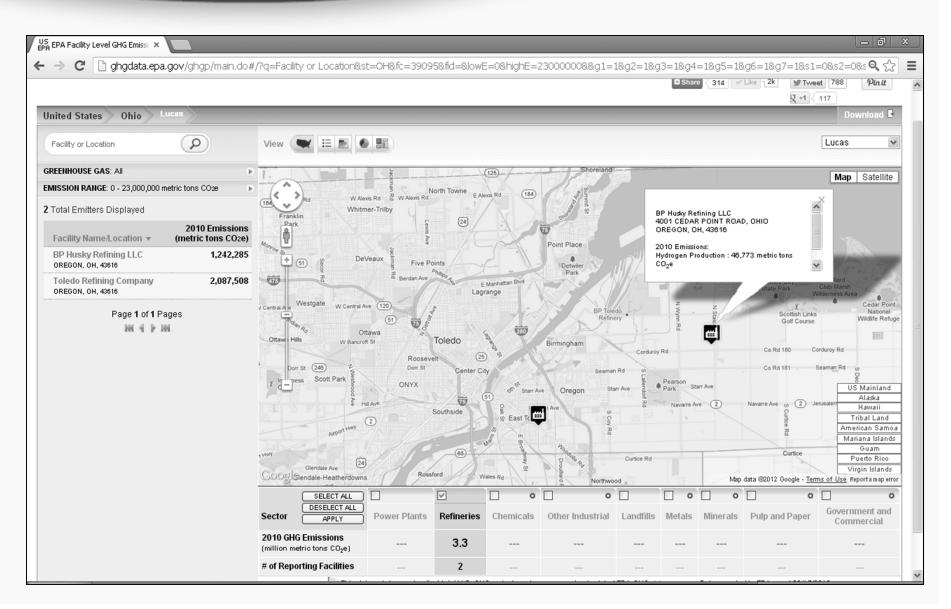
Ohio Refineries





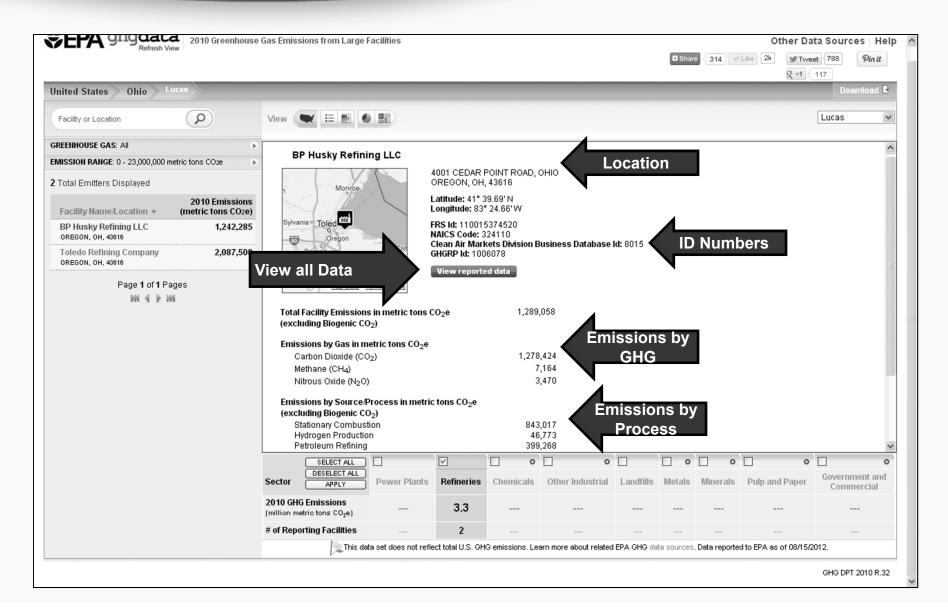
Lucas County Refineries





Facility Profile Screen





Detailed Facility Data



Description of Best Available Monitoring Methods Used:

Part 75 Biogenic Emissions Indication:

Primary NAICS Code: 324110 Second Primary NAICS Code:

Parent Company Details:

Parent Company Name: Husky Energy Inc.

Address: 707-8th Avenue SW, Box 6525, Station, Calgary, Alberta, Can, MT 00000

Percent Ownership Interest: 50

Parent Company Name: BP America Inc.

Address: 501 Westlake Park Boulevard, Houston, TX 77079

Percent Ownership Interest: 50

Subpart C: General Stationary Fuel Combustion

Gas Information Details

Gas Name	Other Gas Name Ga	as Quantity	Own Result?
Biogenic Carbon dioxide	0 ((Metric Tons)	
Methane	45	5.1 (Metric Tons)	
Nitrous Oxide	8.9	955 (Metric Tons)	
Carbon Dioxide	83	39293.8 (Metric Tons)	

Unit Details:

Unit Name: B031 Vac 1 Furnace Unit Type: F (Furnace)

Individual Unit Details:

Maximum Rated Heat Input Capacity: 130 (mmBtu/hr)

Emission Details:

Annual Sorbent based CO2 Emissions (metric tons): 0.0 Annual Biogenic CO2 Emissions (metric tons): 0.0 Annual Fossil fuel based CO2 Emissions (metric tons):

Tier Fuel Details:

Fuel: Fuel Gas

Tier Name: Tier 3 (Equation C-5, gaseous fuel) Tier Methodology Start Date: 2010-01-01 Tier Methodology End Date: 2010-12-31

Fuel Emission Details :

Total CO2 emissions Total CH4 emissions|Total N2O emissions|Total CH4 emissions CO2e|Total N2O emissions CO2e| 43854.5 (Metric Tons) 2.40 (Metric Tons) 0.480 (Metric Tons) 50.4 (Metric Tons) 148.8 (Metric Tons)

Carbon Content Substitute Data Information :

Total number of valid carbon content determinations : 364 Total number of carbon content substitute data values: 1 Frequency of carbon content determinations: Weekly

Total number of operating hours in the reporting year for which missing data substitution was used for fuel usage : 0

Molecular Weight Information :

Total number of valid molecular weight determinations: 364 Total number of molecular weight substitute data values: 1 Frequency of molecular weight determinations: Weekly

Unit Name: B013 Reformer 1 Regenerator Heater

Unit Type: PRH (Process Heater) Individual Unit Details:

User Interface View

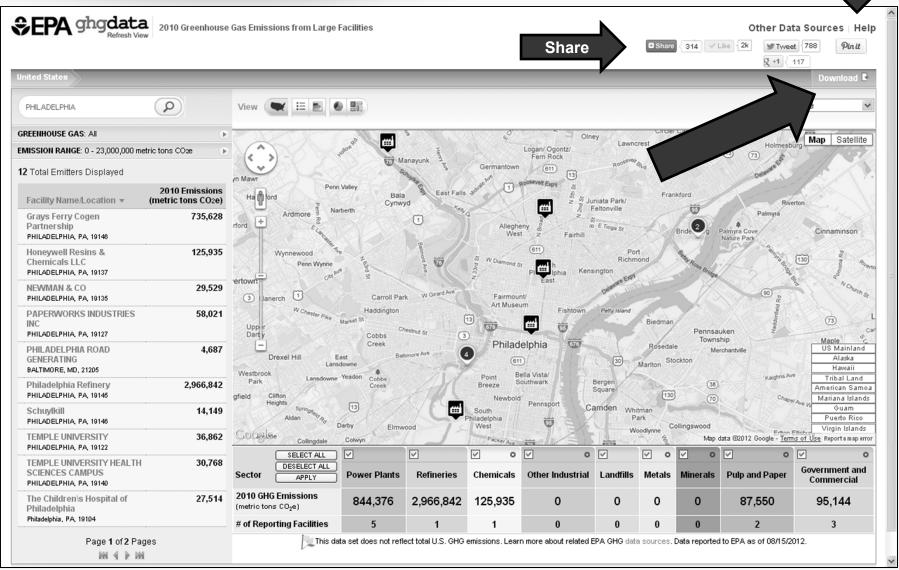




Philadelphia Facilities







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Greenhouse Gas Data Sets

These files contain the publicly available data from the GHG Reporting Program for 2010. This data includes non-confidential data reported by facilities that directly emit GHGs. The files also contain non-confidential information reported by suppliers of fossil fuels and industrial gases. A limited subset of the supplier data has not been released and will be available in the coming weeks. All information reflects the most recent data submitted by facilities to EPA prior to August 18, 2012. Sign up for our RSS feed to be informed when updated data becomes available. This data set does not include data elements that are considered confidential business information or for which no confidentiality determinations have been made. EPA is not able to share confidential business information with the

- Download Summary 2010 GHG Data (XLSX, 1,2M) This excel file contains the same information available in the Data Publication Tool. The file contains the most important, high-level information reported by direct emitters and suppliers and can be easily sorted to respond to many common queries.
- . Download Parent Company Data (XLSX, 1.1M) This excel file contains the name and location of each facility's highest-level United States parent company/companies as reported to EPA. Facilities report the parent company/companies that owned the facility on December 31 st in the reporting year. Facilities report U.S. parent companies only. The file includes important information about interpretation of this
- . Download Aggregated GHG Data for Importers/Exporters of Petroleum Products (XLSX, 9K) This excel file contains the total GHG quantity reported by importers and exporters of petroleum products (Subpart MM) as reported to the GHGRP for 2010.
- . Download 2010 GHG Data These files contain publicly available data reported by facilities to EPA under the Greenhouse Gas Reporting Program for 2010. These files include non-confidential data reported to EPA. Instructions for how to open these files in commonly used data analysis software are included.
 - . Download 2010 GHG Data One large file (ZIP, 6M) This zip file contains one large XML file which houses all data that has been determined to be non-confidential as reported by facilities in the following industry types: Stationary Fuel Combustion (C), Electricity Generation (D), Ammonia Manufacturing (G), Cement Production (H), Ferroalloy Production (K), Glass Production (N), Hydrogen Production (P), Iron and Steel Production (Q), Lime Manufacturing (S non-CEMS), Petrochemical Production (X), Petroleum Refineries (Y), Pulp and Paper Manufacturing (AA), Municipal Solid Waste Landfills (HH), Suppliers of Natural Gas and Natural Gas Liquids (NN) and Suppliers of Carbon Dioxide (PP). This file is available in XML format, a commonly used data format for transferring large, complex data sets. Users unfamiliar with XML should use the HTML files referenced below.
 - Download 2010 GHG Data By Industry Type (ZIP, 40M) -This zip file includes HTML and XML files for h facility in the subparts listed above, categorized by subpart. HTML files are easily readable using

GHG Data

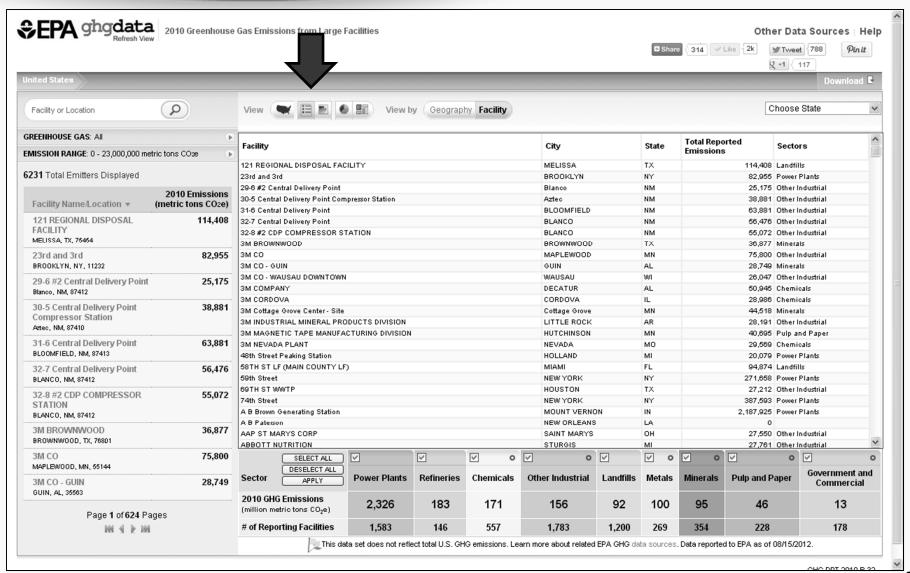
GHG Data Sets

- GHG Data Frequent Questions
- · GHGRP 2010: Reported Data (as of 4/6/12)
- · Power Plants
- Refineries
- · Chemical Manufacturing
- · Other Industrial
- Landfills
- Metals
- · Minerals
- · Pulp and Paper
- · Government and Commercial

oa.gov/climatechange/emissions/ghgdata/2010data.html

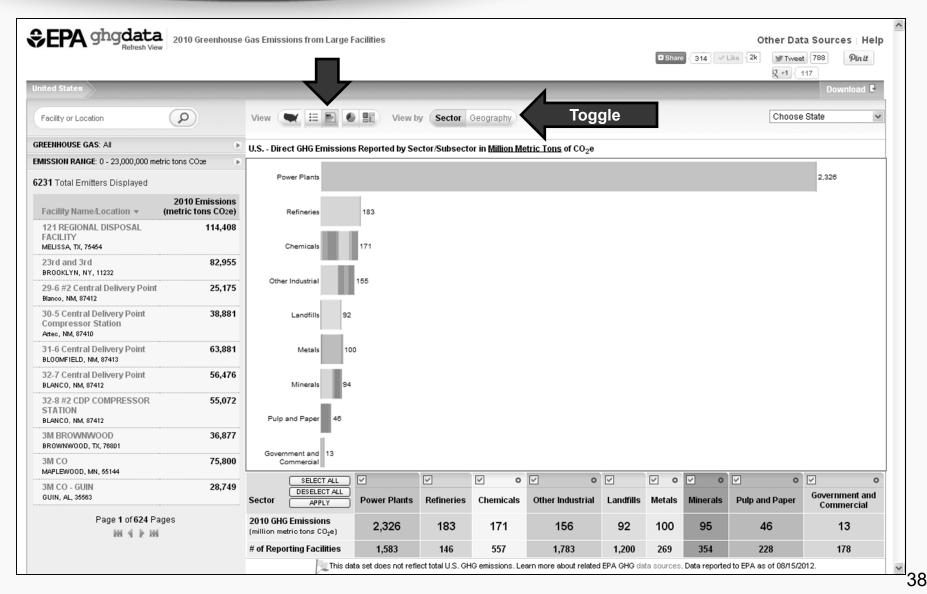
List View





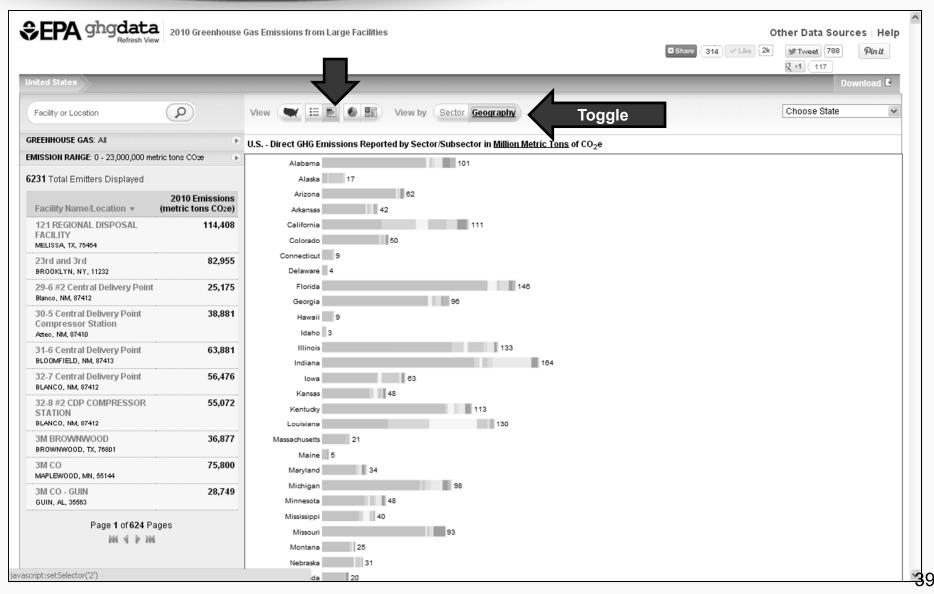
Bar Chart – By Industry





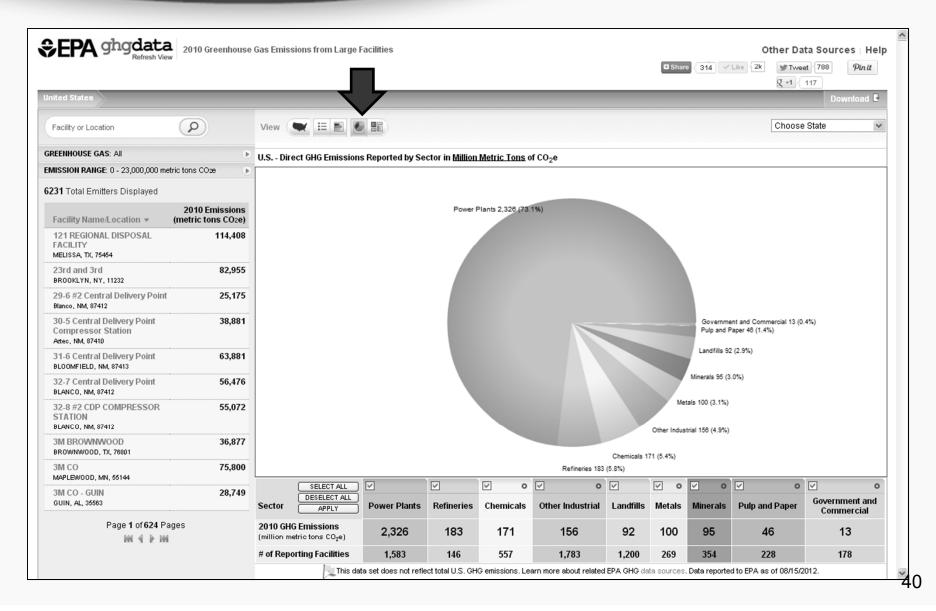
Bar Chart – By State





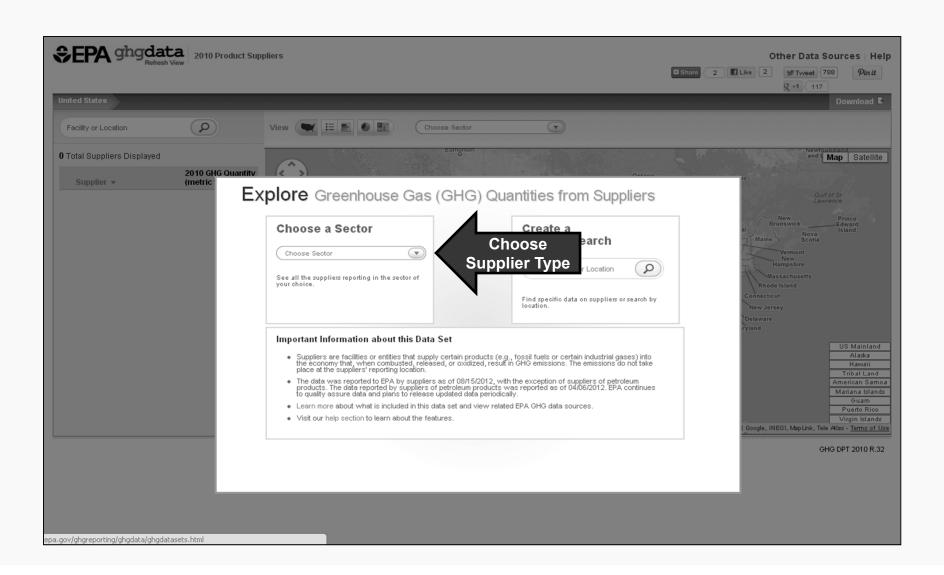
Pie Chart





Suppliers Home Page





Gas Distribution Companies



